CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

COVID-19 Monthly Epidemiological Report
September 2021

*Unless otherwise indicated, data for analyses in this report were extracted from Texas Health Trace on **10/11/2021** and include cases with event dates† through **09/30/2021**. Results are subject to change.*

Key Takeaways

New Cases & Positivity Rate

- During September indicators improved: Bexar County reported 26,414 new cases, 4,174 new COVID-19 associated hospitalizations, and 202 deaths.
- September's positivity rate was lower than August's decreasing from 20.6% at the beginning to August to 3.8% at the end of September — the lowest positivity rate since mid-June (1.7% the week of 6/14/21 to 6/20/21).

Hospitalizations and Deaths

- Deaths increased by 11% compared to the previous month, while new hospitalizations declined by 36%.
- Weekly reported deaths decreased by 54% when comparing September's first and last week.

Cases and Age

- In comparison to August, there was a decrease in the average age of cases from 33 (the previously lowest age average throughout the pandemic) to 31 — ages 0-9 made up 15.3% of September's cases (versus 12.5% of August's cases).
- During September, the highest rates occurred among children and teens ages 10-19 — the highest occurrence for that age group since the pandemic began — followed by age group 30-39.
- The 0-19 age group has accounted for 3.6% of hospitalizations over the entire pandemic — approximately 6% during the month of September.

I. Current Status and Overview of COVID-19 in Bexar County

During the **five calendar weeks** that include September, Bexar County reported* 26,414 new cases along with 4,174 new COVID-19 associated hospitalizations and 202 deaths — a steady decrease throughout the month in new cases, hospitalizations, deaths, and positivity rate.

New cases reported during the calendar month of September **declined by 40% compared to August**. Similarly, compared to August, **new hospitalizations declined by 36%. Deaths**, a lagging indicator, **increased 11%** compared to August. **Test positivity** averaged 5.4% compared to 14.3% for August.

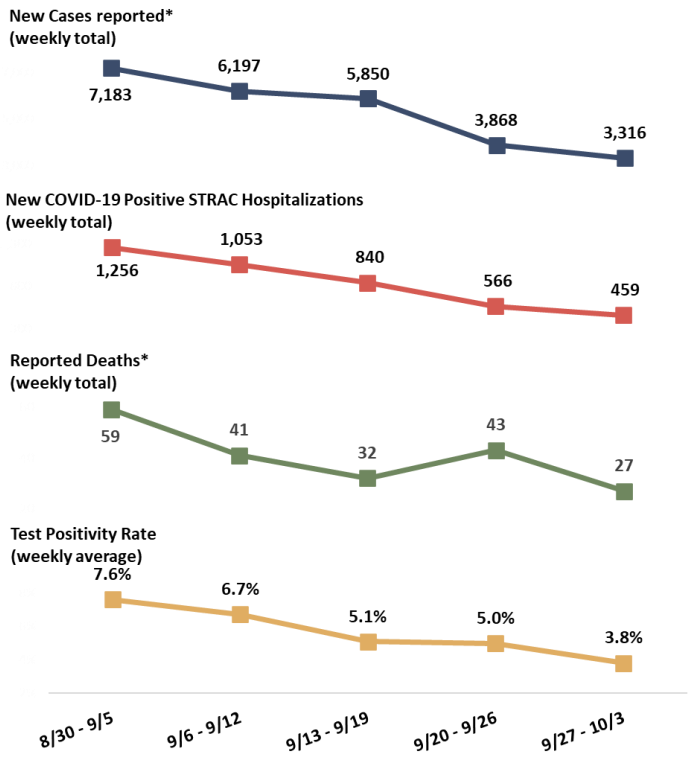
Weekly (Monday - Sunday) newly reported cases decreased steadily during September. By the last week of the month, new weekly cases had declined by 54% compared to the first week.

Weekly new hospital admissions also declined each week during September, dropping 64% from the first to the last week.

Weekly reported deaths declined by 54% from first to last week of September, with a reduction each week except for a temporary increase in the 4th week.

Weekly test positivity declined 50% during September. The positivity rate was 5% or less for the last three weeks.

Weekly Indicator Trends (Mon-Sun)

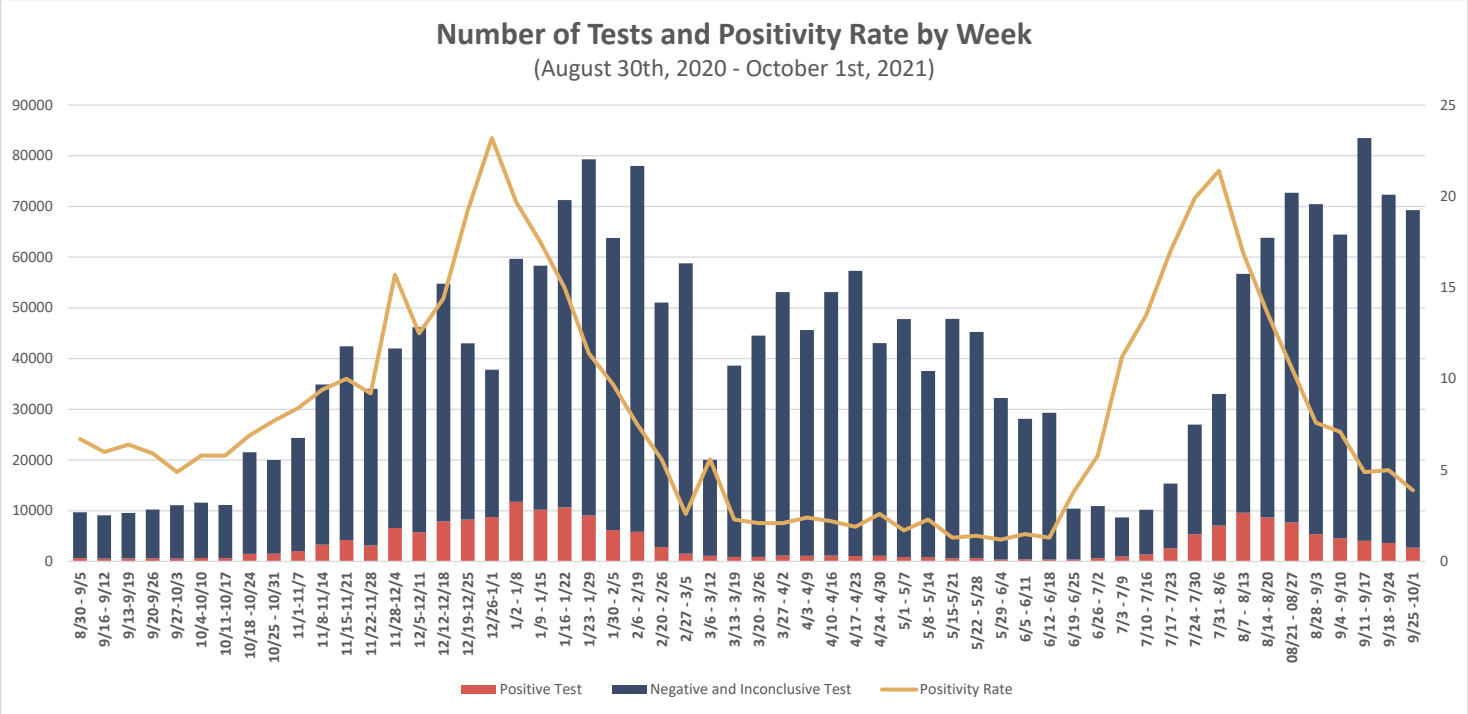


*Reported cases and deaths may have occurred anytime during the previous 14 days. Delayed reports of backlogged cases and deaths are not included in weekly totals.

II. Testing & Positivity Rate

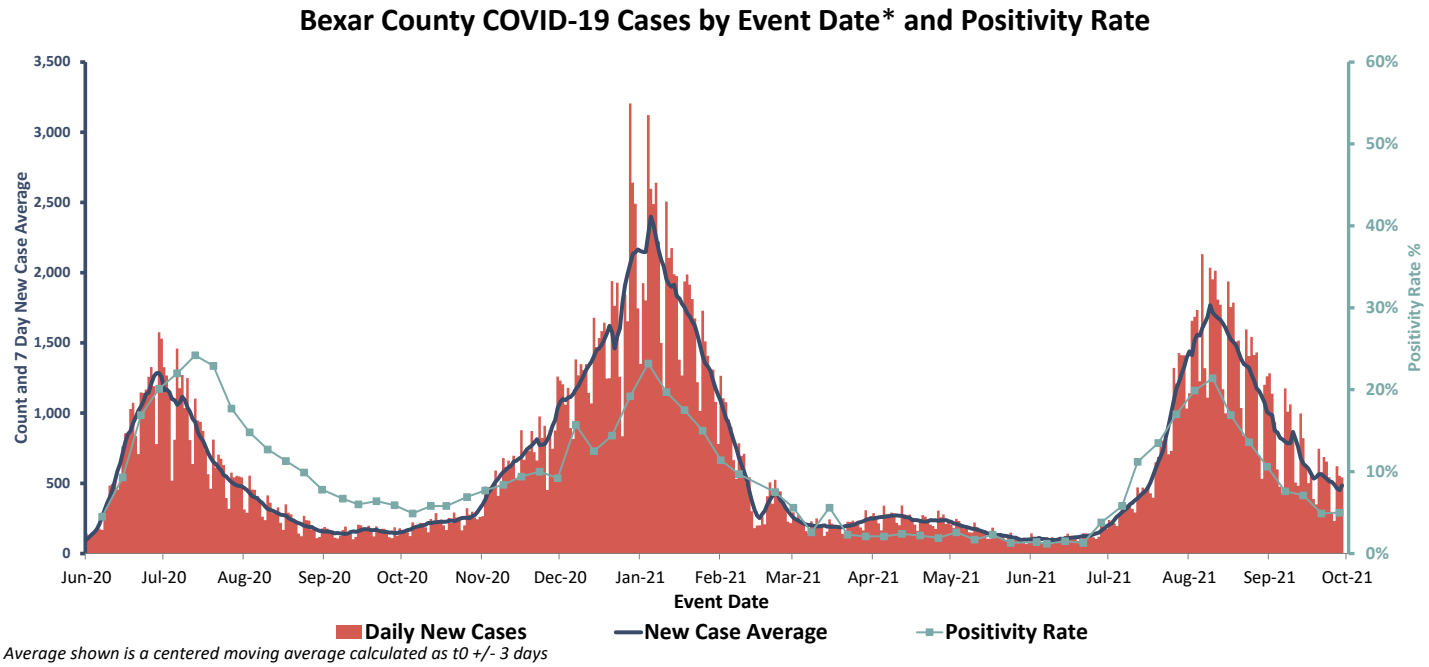
Bexar County's COVID-19 weekly test positivity rate decreased in September, with a **low of 3.8%** during the last week of the month — the lowest positivity rate since the end of June 2021 and a lower percentage when compared to September 2020**.** About 360,000 tests were processed over the month. The month of September had a 44% increase in tests compared to the month of August.

Source: Aggregate Lab Report of labs conducting COVID-19 testing



III. Trends & Demographic Characteristics among COVID-19 Cases

September 2021 continued to see a decrease of COVID-19 in the community. Cases have decreased to 472 daily cases at the end of September, compared to the peak of 2,132 daily cases during the first week of August 2021. Cases also dropped below 300 towards the end of September for the first time since the beginning of July 2021.



Average shown is a centered moving average calculated as t0 +/- 3 days

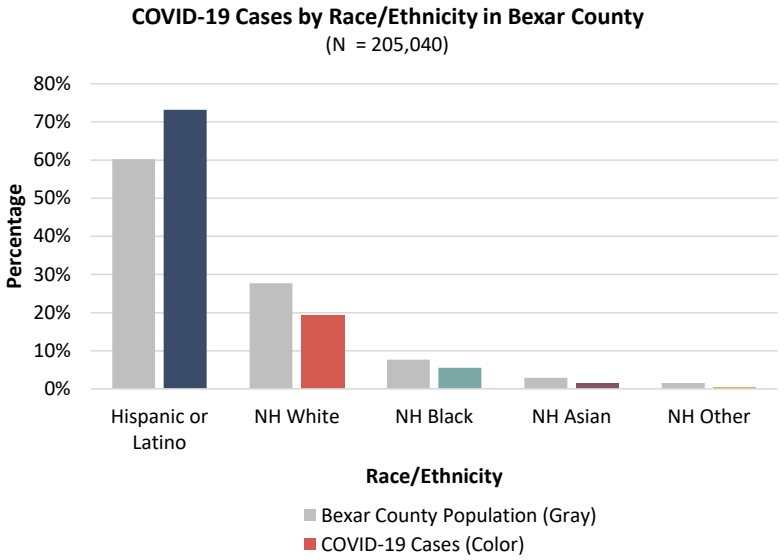
**Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset date not available). This differs from Reported Date.*

III. A. Race/Ethnicity Distribution of Cases

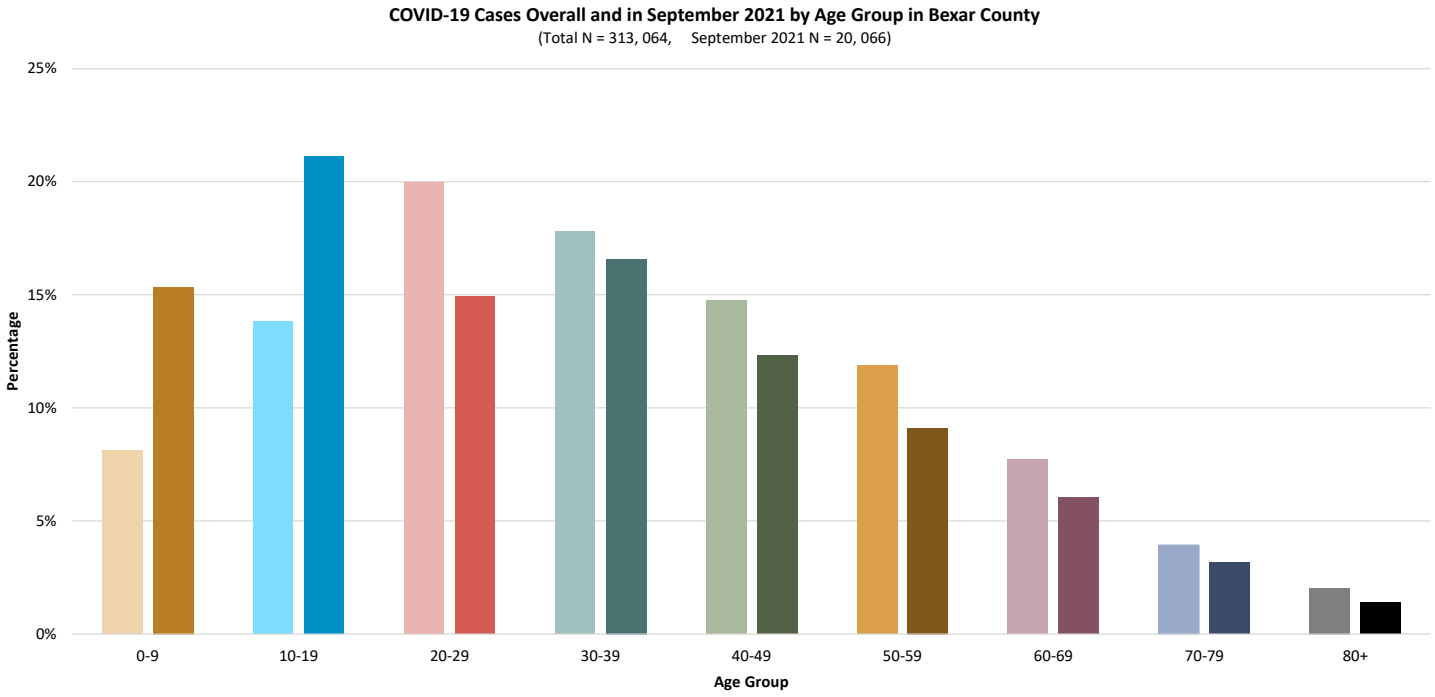
Among cases for whom race/ethnicity data are available (65%), Hispanic individuals constitute most COVID-19 cases in Bexar County, and account for a larger proportion of cases than they do the general population of Bexar County. This pattern is persistent across age groups.

Notes:

1. Data on race and/or ethnicity are currently unavailable for about 35% of cases.
2. The number of Bexar County residents above is the ACS (5-yr) 2019 population estimate.
3. NH = Non-Hispanic

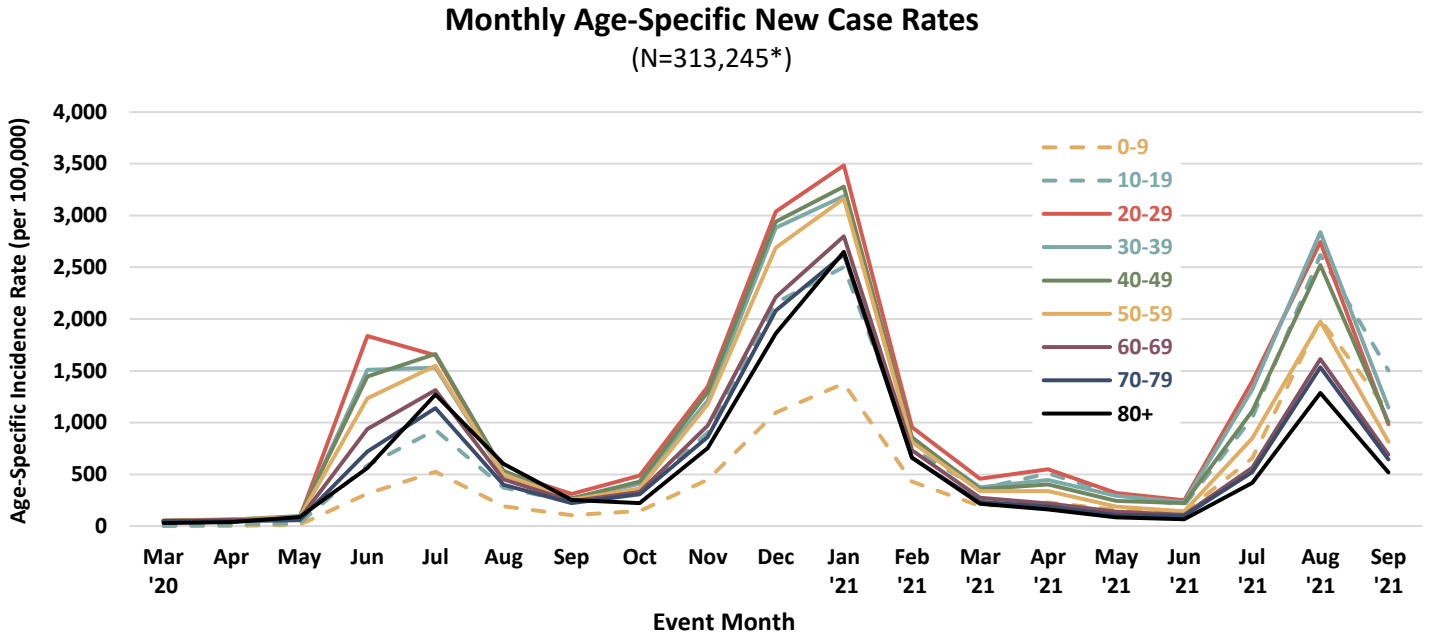


III. B. Age and Gender Distribution of Cases



In September 2021, age group 10-19 years made up the largest proportion of COVID-19 cases, at about **1 in 5 of all cases (21.1%).** This age group was followed by cases aged 30-39 years (16.6%). During the month of September 2021, cases in age groups 0-9, 10-19, and 30-39 made up a higher percentage of cases than the overall pandemic average — the average age of cases in September 2021 (31 years) is lower than the average age of all COVID-19 cases during the pandemic (36 years). The percentage of cases in age groups 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80+ are lower in September 2021 than overall during entirety of the COVID-19 pandemic. Notably, COVID -19 cases aged 0-9 made up 15.3% of September 2021 cases in comparison to the overall average of 8.1% of total COVID-19 cases, and cases aged 20-29 years made up 20.0% of total COVID-19 cases but made up 14.9% of September 2021 cases.

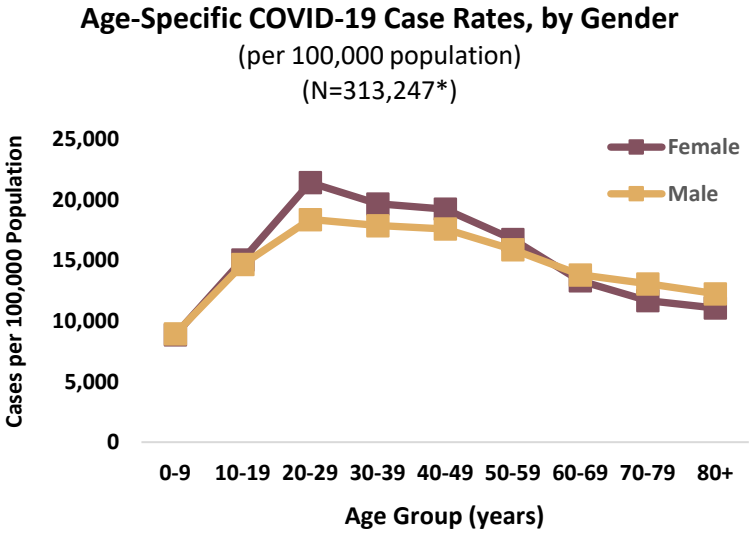
III. C. Age and Gender Distribution of Cases



Age-specific case rates† decreased between August '21 and September '21. **In September '21**, the highest rates occurred among children and teens age **10-19** (**sage dashes**), followed in order by age groups **30-39** (**sage line**), **0-9 years** (**beige dashes**), **40-49** (**dark green**), **20-29 years** (**red**), **50-59** (**solid beige**), **60-69** (**dark maroon**), **70-79** (**dark blue**), with the lowest rate among those age **80+ years** of age (**black**). Compared to the previous month where age group 30-39 made up the highest case rate, **September's age group 10-19 now makes up the highest age-specific case rate** among all age groups.

Over the course of the pandemic, **16% of all residents are known to have had COVID-19**; although, case rates decreased for all age groups from August to September — the largest declines were among the 20-29 and 30-39 age groups.

† Excludes 183 cases with age not available plus 6 cases diagnosed in February 2020 (0.1%).



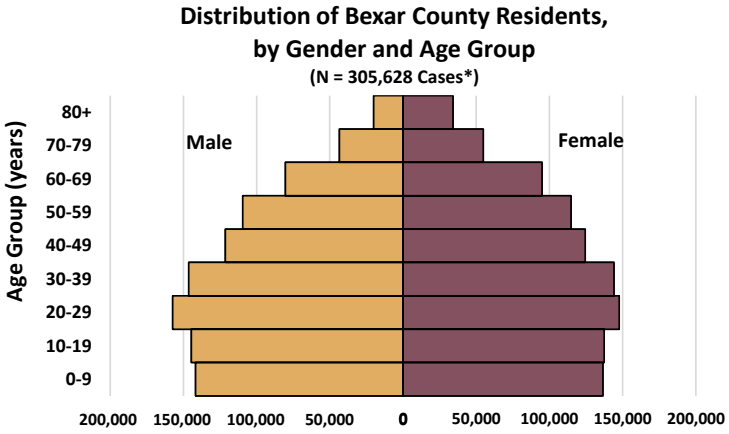
Excludes 7,453 cases (2%) for whom age and/or gender was not available.

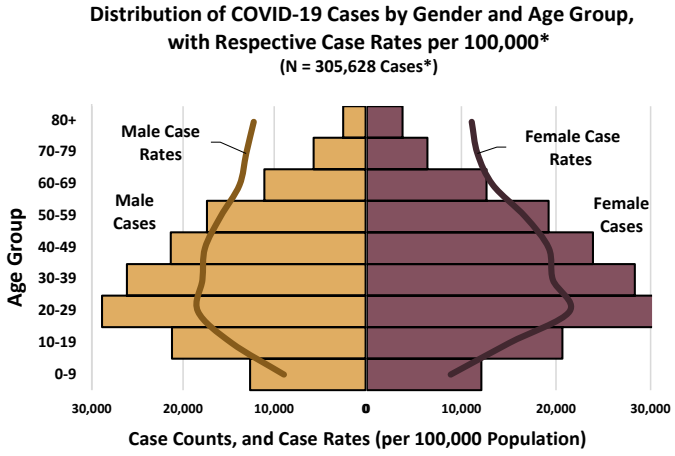
The highest age-specific rates† of COVID-19 have been among young adults and women throughout the pandemic.

Through the end of September '21, the age-adjusted‡ COVID-19 case rates were 16,057 cases per 100,000 females and 15,234 cases per 100,000 males (females 5% higher than males). There were approximately 1,000 cases per 100,000 for each gender in September alone. The overall age-adjusted case rate for the County is now 15,650 cases per 100,000 population, all cases combined.

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
‡Age-adjusted rates are weighted using the US Standard Population 2000.

IV. The Extent of COVID-19 in the Bexar County Population





*Excludes 7,619 cases (2.5%) for whom age and/or gender was not available.

Through the end of September '21, a total of 313,247 Bexar County residents are known to have had COVID-19. **September '21 added approximately 20,000 cases (6.4% of the total to date).**

Overall, **16.0% (1 in 6.2) of Bexar County residents are known to have had COVID-19:** 16.1 % of female residents, and 15.2% of males. The overall age-adjusted case rate is 16.0 per 100,000 residents.

Curved lines superimposed on the case pyramid are **age-specific case rates†** per 100,000 Bexar County residents for each age group, by gender (also shown on previous page).

Young adults ages 20-29 are the age group with the highest case numbers to date (31,648 females and 28,890 males). Similarly, cases rates have also been highest in this age group (21,430 cases per 100,000 females and 18,372 cases per 100,000 males). The female case rate continues to be 17% greater than the male rate.

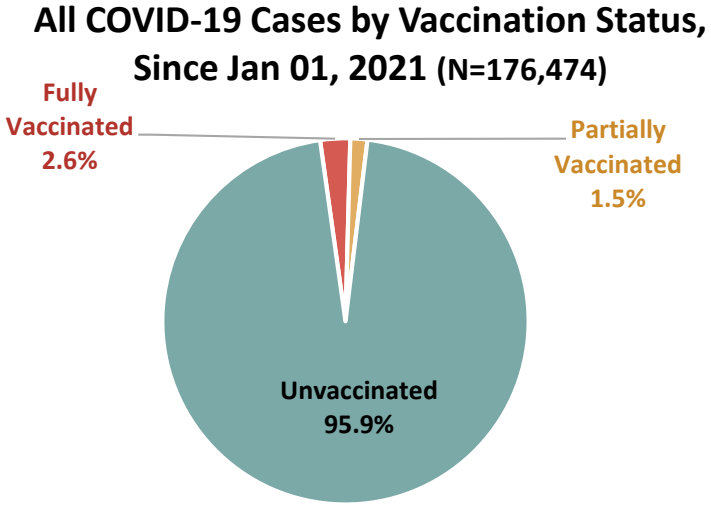
The oldest age group, **age 80+ years**, has experienced the fewest cases: 3,785 female and 2,461 male cases to date. Case rates are now 11,088 per 100,000 females, and 12,249 per 100,000 males.

The lowest case rates have consistently been among **children below the age of 10 years**: about 8,900 cases per 100,000 population of each gender. However, this age group does not experience the fewest case, because of the large number of young children in Bexar County.

Cumulative case rates increased by about 5% to 6% for most age groups during September. However, the case rate among children ages 0 - 9 years increased by 14%, among those ages 10-19 years by 11%.

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
*Gender and/or age data were not available for 7,619 cases (2.5%).

Of the 176,474 COVID-19 cases identified from January 1st, 2021 through the end of September 2021, at least **4.2% had received some vaccination[1,2]: at least 4,667 (2.6%) were fully vaccinated (breakthrough cases)**, and at least 2,650 (**1.5%) were partially vaccinated.** The proportion of **breakthrough cases increased from 0.01% in January to 3.6% in May and averaged 4.9% from June through September[3]**.



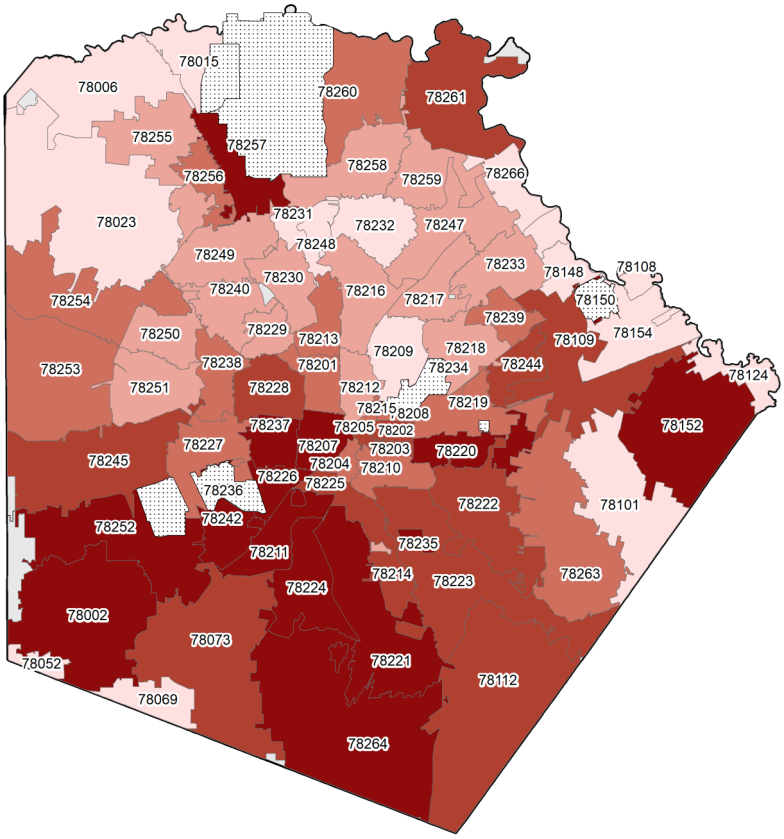
Notes:

Vaccination data were incomplete for 59% of cases at time of analysis. Therefore, percentages vaccinated, whether fully or partially (and breakthrough cases) are likely to be underestimates and biased towards those cases hospitalized or deceased (for whom vaccination data were most complete).

[1] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis.

[2] A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.

COVID-19 Case Rate per 100,000 Population

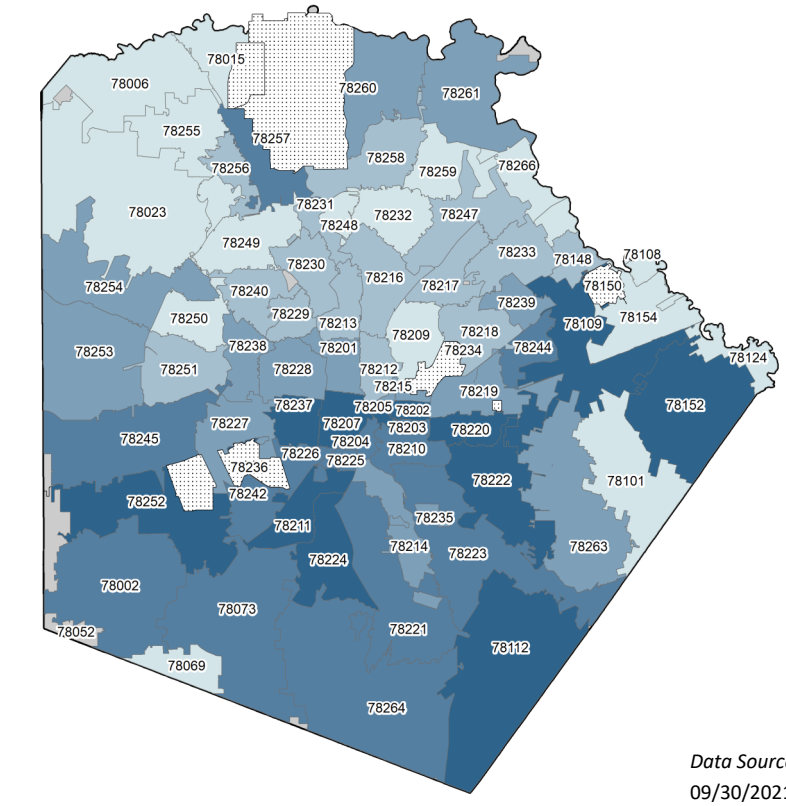


The geographic distribution of total COVID-19 case rate by zip code continues to show **the highest rates of infection have generally been in the southern portion of Bexar County.** The overall COVID-19 case rates range from 133 per 100,000 population to 94,595 per 100,000 population.

COVID-19 Case Rate per 100,000 Population

- 133 - 10,995
- 10,996 - 14,372
- 14,373 - 17,210
- 17,211 - 19,108
- 19,109 - 94,595
- Suppressed due to counts <5
- Military Bases

September 2021 COVID-19 Case Rate per 100,000 Popula-

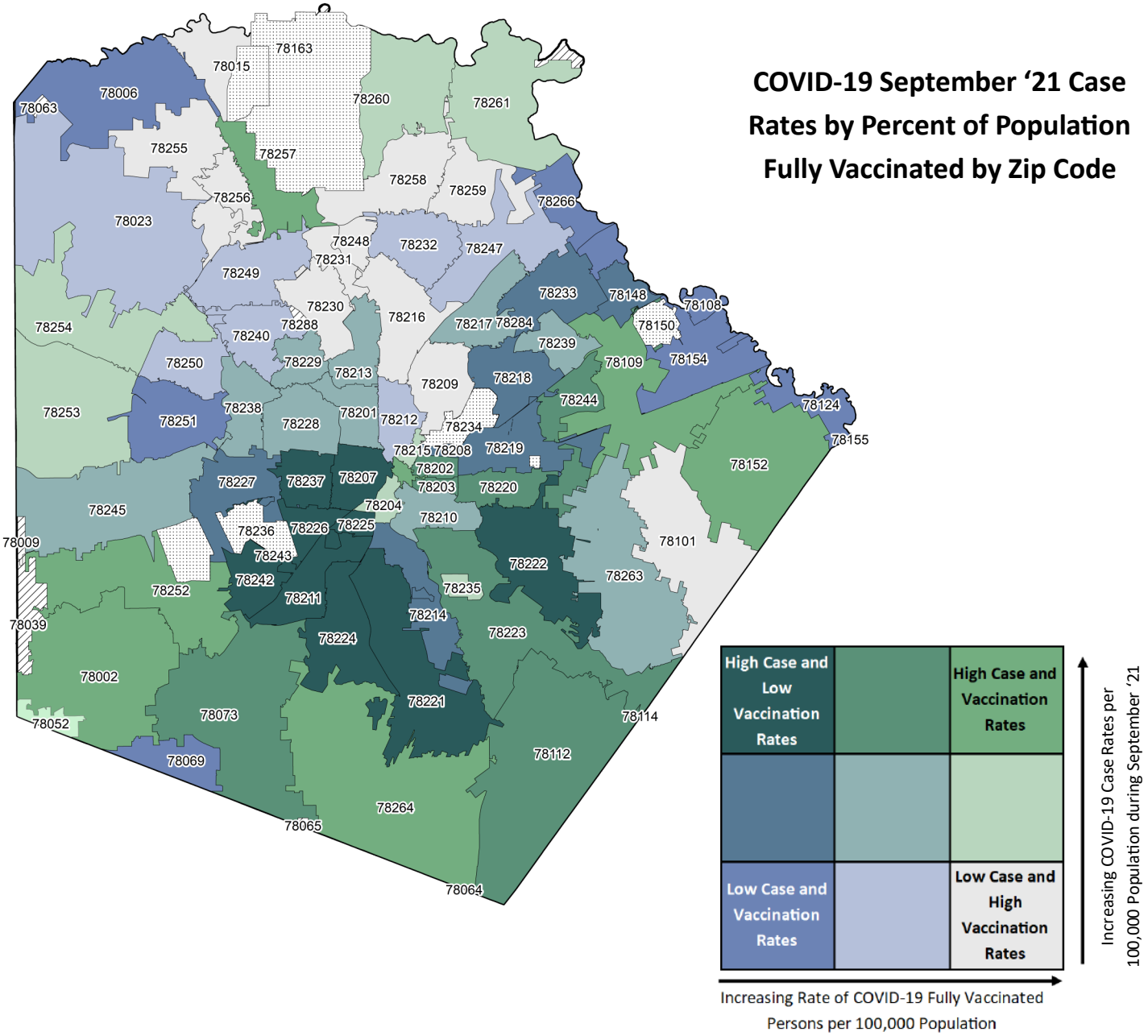


For the month of September 2021, the highest rates of new COVID-19 infections occurred in the eastern, far southern, and southwestern portions of Bexar County. **New monthly case rates ranged from 45 cases per 100,000 population to 27,027 cases per 100,000** population during the month of September 2021.

September 2021 Case Rate per 100,000 Population

- 45 - 1,526
- 1,526 - 2,159
- 2,159 - 2,680
- 2,680 - 3,091
- 3,091 - 27,027
- Suppressed due to counts <5
- MilitaryBases

Data Source: SAMHD COVID-19 case data through 10/11/2021, event dates through 09/30/2021; U.S. Census, ACS 2019 5-year Population Estimates, Table S0101.



The above map shows the geographic distribution by zip code of COVID-19 case rates per 100,000 population during the month of September 2021 (based on Event Date) and the cumulative rate of COVID-19 fully vaccinated persons per 100,000 population. Both rates are divided into lowest, middle, and highest rate thirds.

Zip codes shaded dark green indicate they are in the highest third of new COVID-19 case rates, as well as in the lowest third of rates for fully vaccinated persons. **Zip codes with the lowest rates of fully vaccinated persons and the highest rates of September COVID-19 cases tended to be just south and west of downtown San Antonio**. Conversely, those zip codes shaded in light gray indicate they are in the lowest third of new COVID-10 case rates for the month, and the highest third for case rates of fully vaccinated persons. **Zip codes with the highest rates of fully vaccinated persons and the lowest rates of September COVID-19 cases tend to be north of downtown San Antonio and in the far northern portions of Bexar County**.

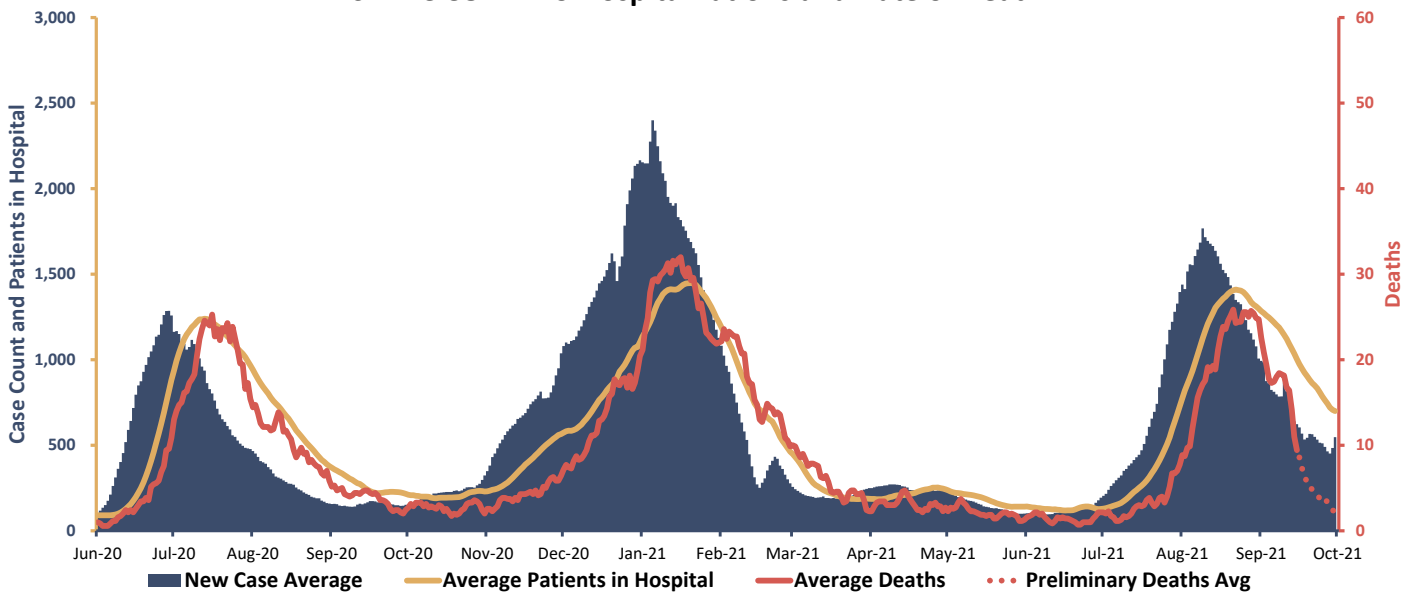
Data Source: SAMHD COVID-19 Database, as of 08/09/2021; U.S. Census Bureau, ACS 2019 5-Year Estimates, Table S1701

V. Hospitalizations and Deaths among COVID-19 Cases

September 2021 demonstrated a decrease COVID-19 cases, hospitalizations, and deaths. The new case average at the end of September decreased to 548 cases per day while hospitalizations came down to 698 average patients in local hospitals per day. While there was a higher number of reported cases and hospitalizations recorded during the third surge compared to the first surge, the average deaths had similar peaks at around 26 deaths per day.

Note: The death data for the last two weeks of September are considered preliminary as death certificates make their way to Metro Health for confirmation.

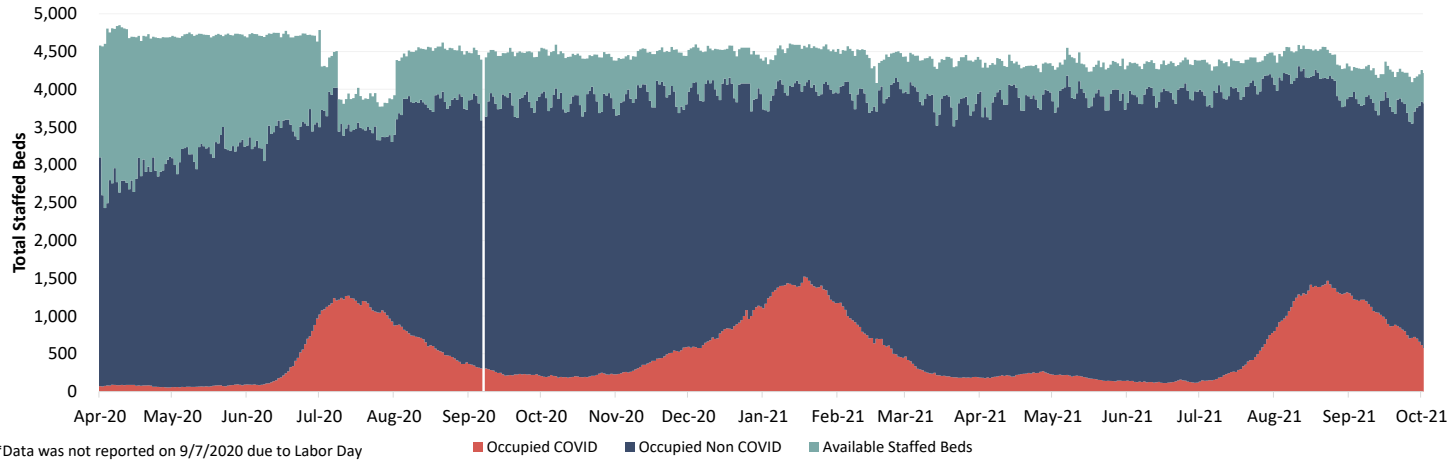
Bexar County Cases by Event Date,
STRAC COVID-19 Hospitalizations and Date of Death



Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 10/11/2021
Note: Average shown is a centered moving average calculated as t0 +/- 3 days

In September, **COVID+ occupancy (coral) demonstrated a significant decrease to 653 beds per day, a 49% decrease from August 2021** (1,284 beds per day)**.** Available (unoccupied) staffed beds (teal) made up about 10% of total staffed beds at the end of September. Non-COVID+ occupancy (navy) increased by 19% to an average of 3,068 beds per day in September.

STRAC Hospital Capacity

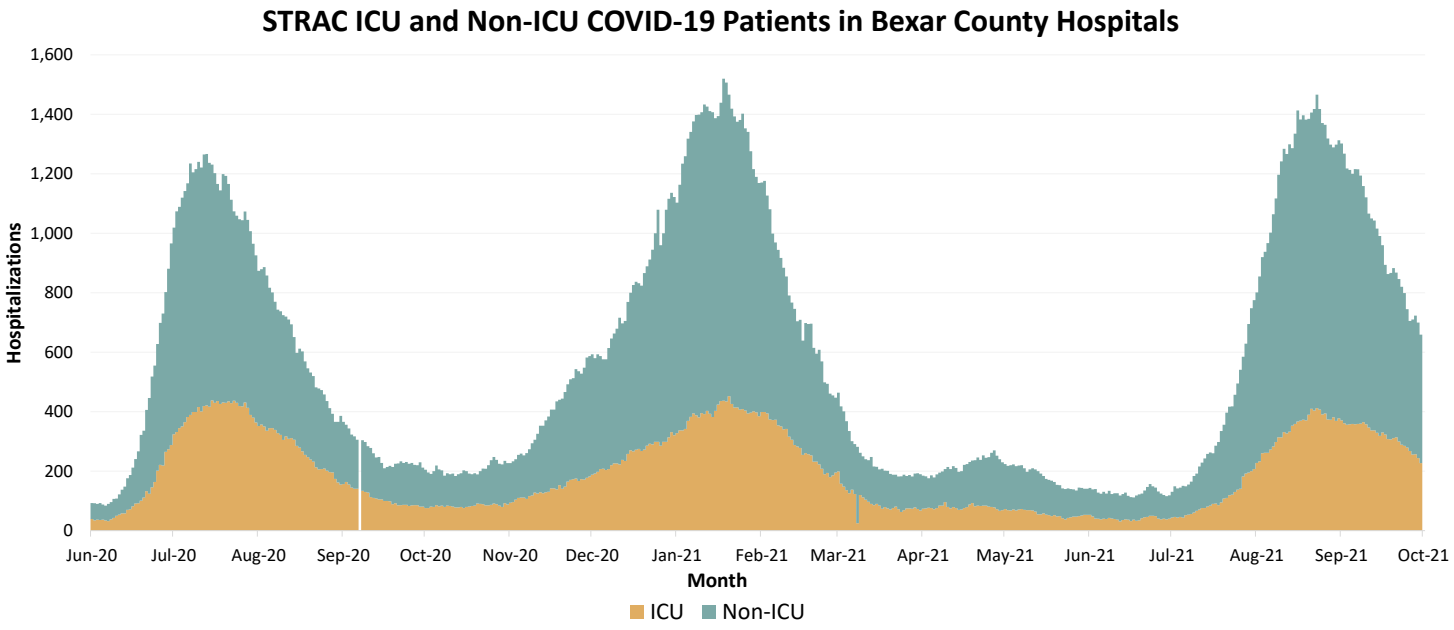


*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 10/11/2021.
Note: General and specialty hospitals in Bexar county designated by the Southwest Texas Regional Advisory Council as part of the local trauma/emergency healthcare system. Includes hospitals in the Baptist, Christus, Methodist, SW General, University, BAMC and VAMC systems treating COVID+ patients.

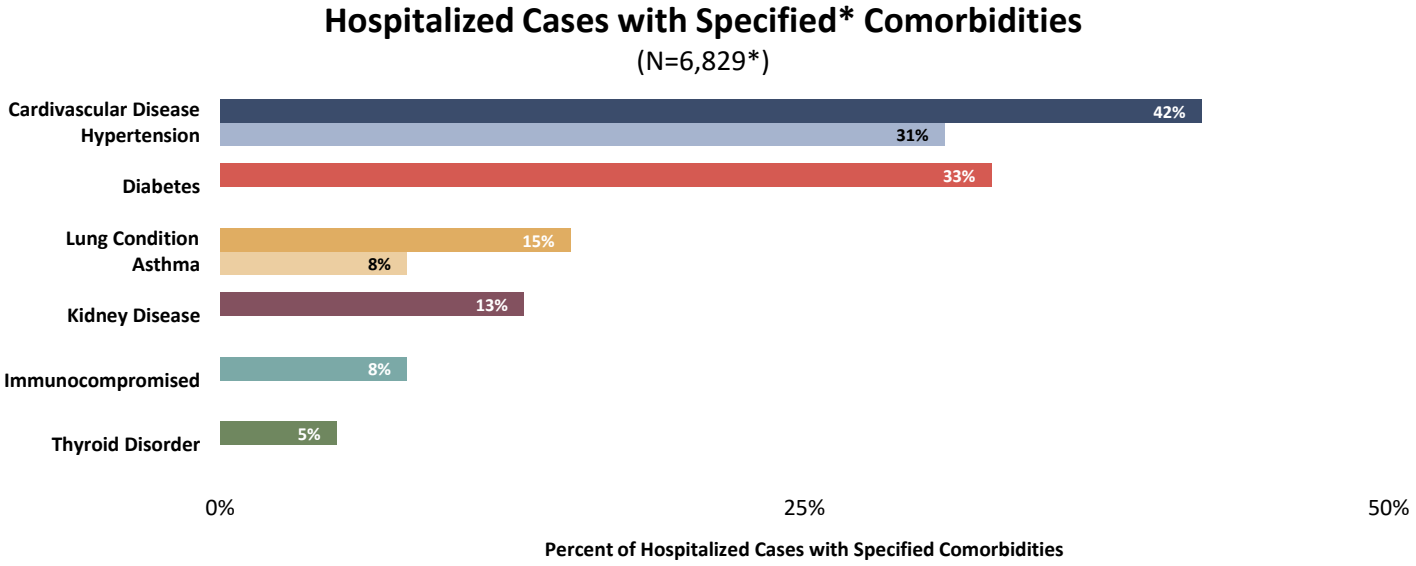
The **number of cases in the ICU decreased to 227** at the end of September 2021. **ICU cases dropped below 300 patients** in the middle of September for the first time since the beginning of August 2021. The average percentage of COVID+ patients admitted to the ICU continues to account for about a third of overall hospitalizations.

Note: Patients typically stay several days in the hospital, especially in the ICU.



*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 10/11/2021

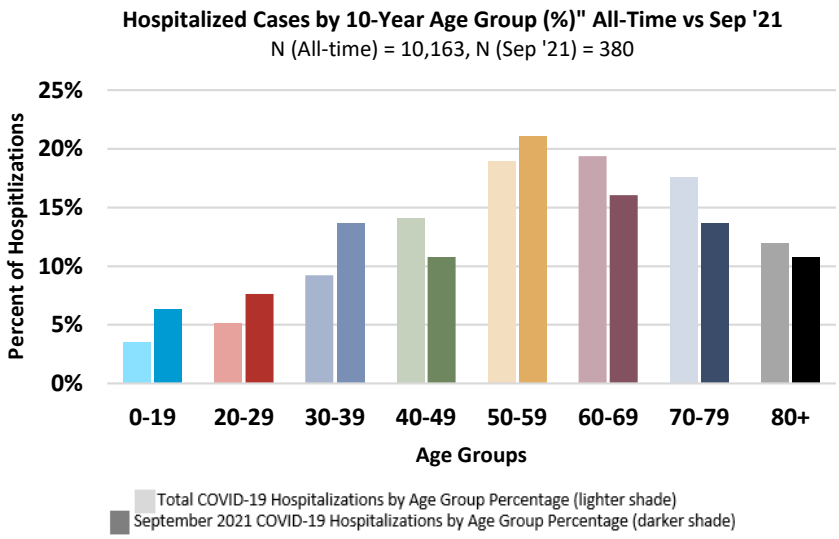


Data including the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 67% of the hospitalized cases (N=6,829). **Among these cases with at least one comorbidity, cardiovascular disease** (42%) **was the most prevalent** (31% specifically reported hypertension), **followed by diabetes** (33%).

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease," and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.

*Excludes 3,334 (33%) deceased cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcomes, or for whom data pertaining to these comorbid conditions.

V. B. Hospitalization and Age



To date, 10,163 individuals (3% of all cases) have been hospitalized due to COVID-19, including 380 new hospitalizations in September 2021.

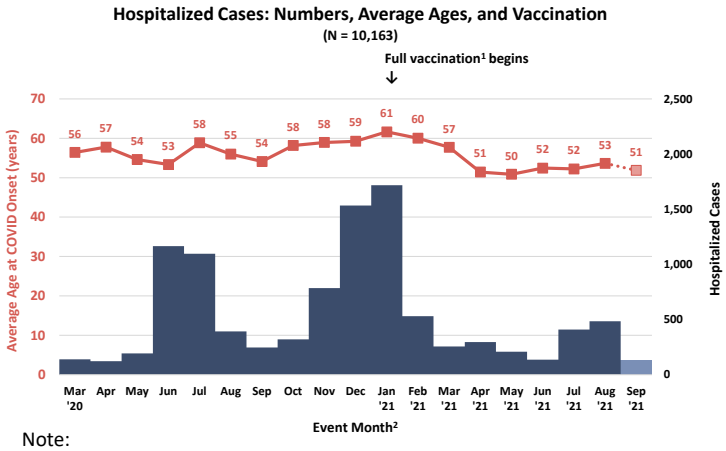
Throughout the pandemic, and in September, **the three age groups that contributed the largest percentages of all hospitalized cases were 50-59, 60-69, and 70-79**. The 0-19 age group has accounted for 3.6% of hospitalizations over the entire pandemic — approximately 6% during the month of September.

In September, hospitalizations increased for ages 30-39, 50-59, and 60-69, but declined among the other age groups when compared to all COVID-19 hospitalizations throughout the month.

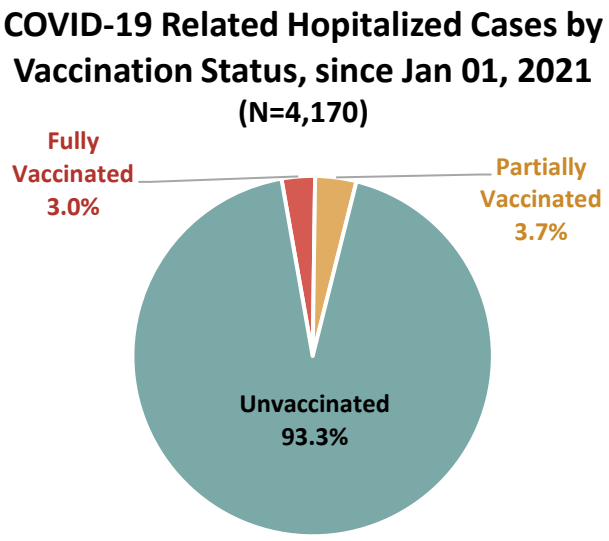
The **average age of hospitalized cases has declined,** from 61 years in Jan '21, to 52 years in June and July '21, and **decreased to 51 years in September '21**.

Starting in May '21, the average is observed to be approximately 51 years. **The decline in average age coincides with the availability of vaccination**[3].

Full vaccination[1] began among older individuals in the latter part of Jan '21, and was gradually extended to younger ages. San Antonio began vaccinating children age 12 and older on May 13th, 2021.



Note:
The dotted line indicates that September data may be incomplete at time of analysis.



Of the 4,170 hospitalized cases with COVID-19 onset on or after January 1st, 2021 at least 279 (6.7%) had received some vaccination[1,2]: 125 (3.0%) were fully vaccinated and 154 (3.7%) were partially vaccinated. The percent fully vaccinated increased from 0.1% in January, to 5.3% in May, and then averaged 8.9% from June through September. The percent partially vaccinated increased from 2.2% in January to a high of 9.5% in April, and then declined to an average of 3.5% of all hospitalized cases.

Vaccination data were incomplete for 4% of known hospitalized cases at time of analysis. Hospitalization data were also incomplete for cases with COVID-19 onset during September.

Notes:
[1] A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.
[2] Event date is the date of first positive test, or symptom onset (if available). This is not the date of hospitalization.
[3] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis.

V. C. Deaths

To date, **a total of 4,635 Bexar County residents are known to have died due to COVID-19**. This is **1.5% of all known COVID-19 cases (**1.8% of male and 1.3% of female cases). Although more COVID-19 cases have occurred among women, males continue to account for more than half of all deaths of known gender (56%). As the top pyramid graph shows, these deaths have occurred primarily among older persons.

Age-specific mortality rates† (curved lines on top graph) show that **males have higher rates of death (per 10,000 population) compared to females**, in every age group 30-39 years and older. This pattern has persisted throughout the pandemic.

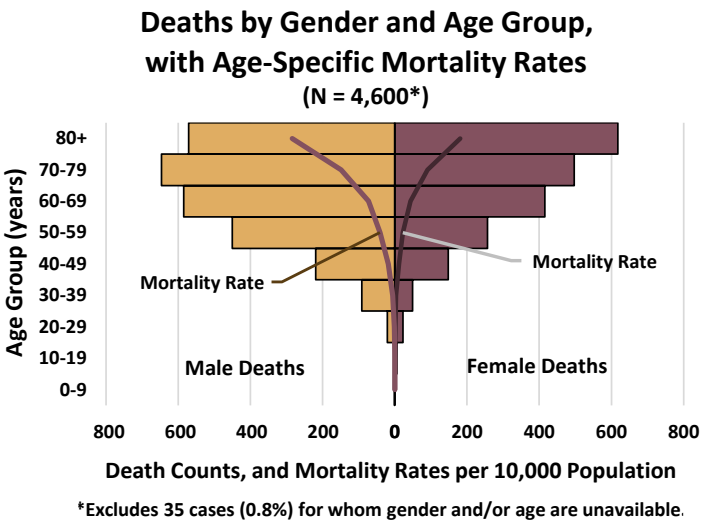
The risk of death among COVID-19 cases (case fatality rate, shown in bottom pyramid graph) also increases with age, particularly for males. Among persons 80+ years of age who have COVID-19, the risk of death is 23% for males, and 16% for females. Although persons 60 years of age and older have accounted for 14% of all cases, they have experienced 72% of all deaths. **Whereas the average age at COVID-19 onset is 36 years, the average age of deceased cases is 69 years** (age 67 for males, 70 for females).

Cumulative age-adjusted mortality rates‡ are now 320 per 100,000 males, and 197 per 100,000 females. The overall rate, including persons for whom gender is not available (N=34), is **237 deaths per 100,000 population**.

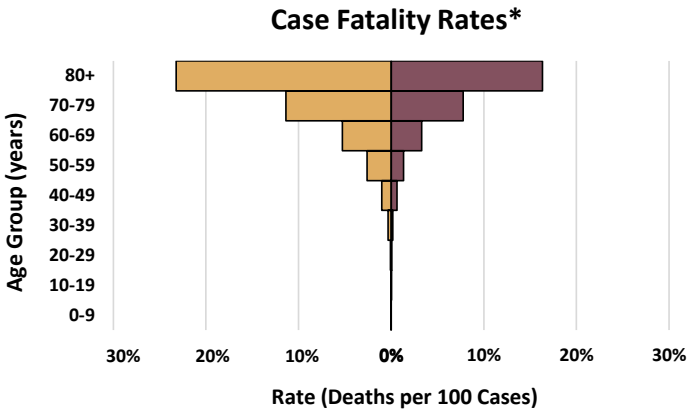
Full vaccination of older individuals began in the later part of January '21. Since Jan '21, the **average age of deceased cases has declined from 71 years to 62 years** in August '21 (September '21 data are incomplete).

†Age-specific rates use ACS 5-yr 2019 gender-specific population estimates for Bexar County.

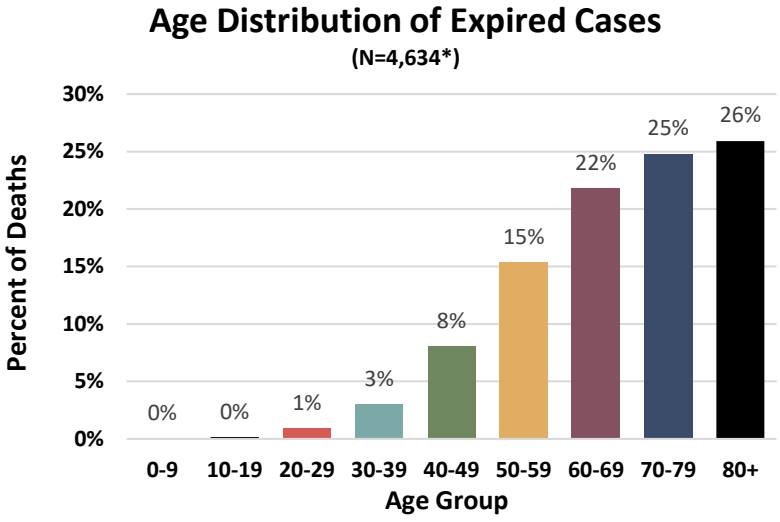
‡Age-adjusted rates use the ACS 5-yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.



*Excludes 35 cases (0.8%) for whom gender and/or age are unavailable.



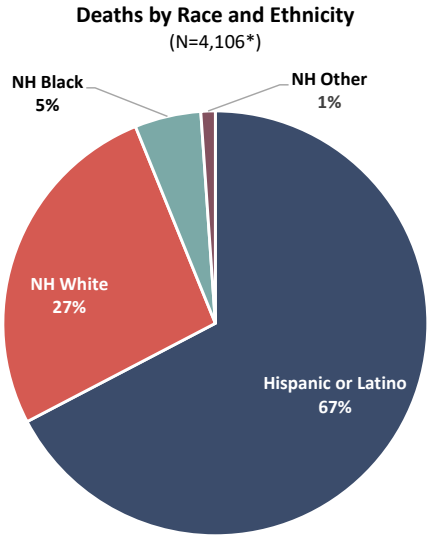
* N = 4,600 Deaths among 305,628 Cases. Excludes 35 Deaths (0.8%) and 7,619 Cases (2.5%) for whom gender and/or age are unavailable.



* Excludes one death with age not available.

Half (51%) of all deaths due to COVID-19 have occurred to cases ages 70 years of age and older.

Deaths among children and adults below age 30 years are rare, accounting for 1% of all deaths. To date, 44 cases in this age range have died due to COVID-19.



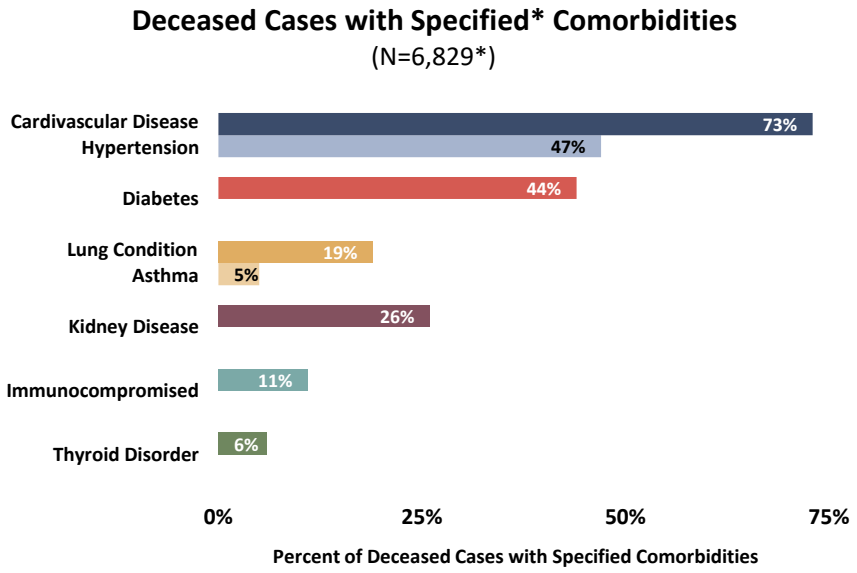
Of the COVID-19 related deaths with race/ethnicity data available, Hispanic or Latino individuals continue to account for 67% of the deaths, compared to 60% of the Bexar County population identifying as Hispanic or Latino†.

Notes: Excludes 529 deceased cases (11%) for whom race and ethnicity data are not available.

Data including the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 66% of deceased cases (N=6,829).

Among deceased cases with at least one comorbidity, cardiovascular disease (73%) was the most prevalent, followed by diabetes (44%).

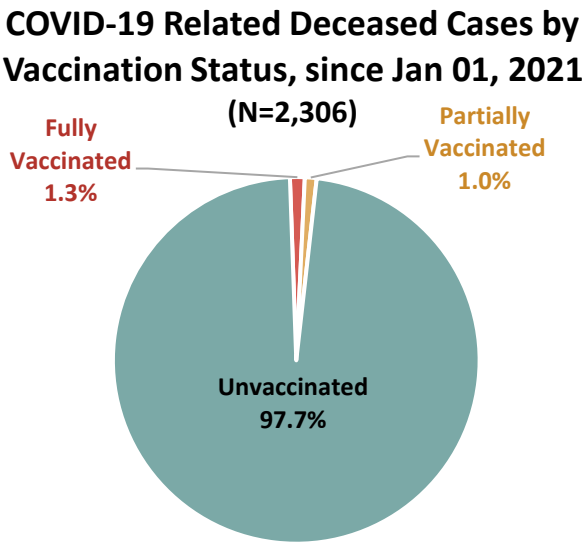
Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.
*Excludes 3,334 (33%) hospitalized cases not reported to have at least one of these specific comorbidities associated with poor COVID -19 outcome, or for whom such comorbidity data were not available.



Of the 2,306 COVD-19 related deceased cases with disease onset since Jan 1st, 2021 a total of 54 (2.3%) are known to have received some vaccination[1,2]: 30 (1.3%) were fully vaccinated, and 24 (1.0%) were partially vaccinated. The first death of a known fully vaccinated case occurred in a case with COVID-19 onset in April. An average of 2.6% of deceased cases have been fully vaccinated since April, with no clear trend over time.

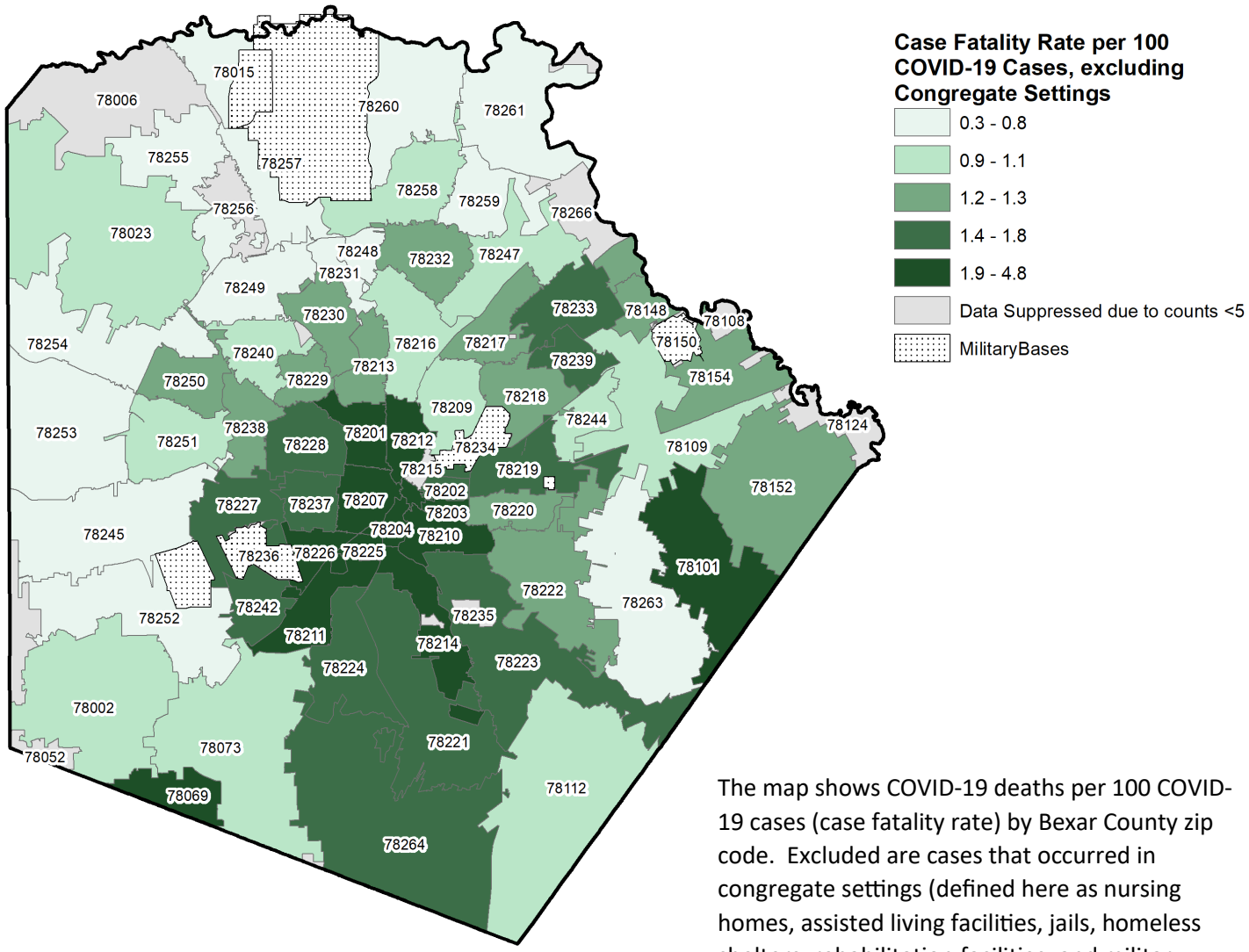
Vaccination data were incomplete for 14% of known deceased cases at time of analysis. Mortality data were also incomplete for cases with COVID-19 onset during August and September.

Notes:
[1] A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.
[2] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis.



COVID-19 Case Fatality Rate by Zip Code

(Excluding Congregate Settings)

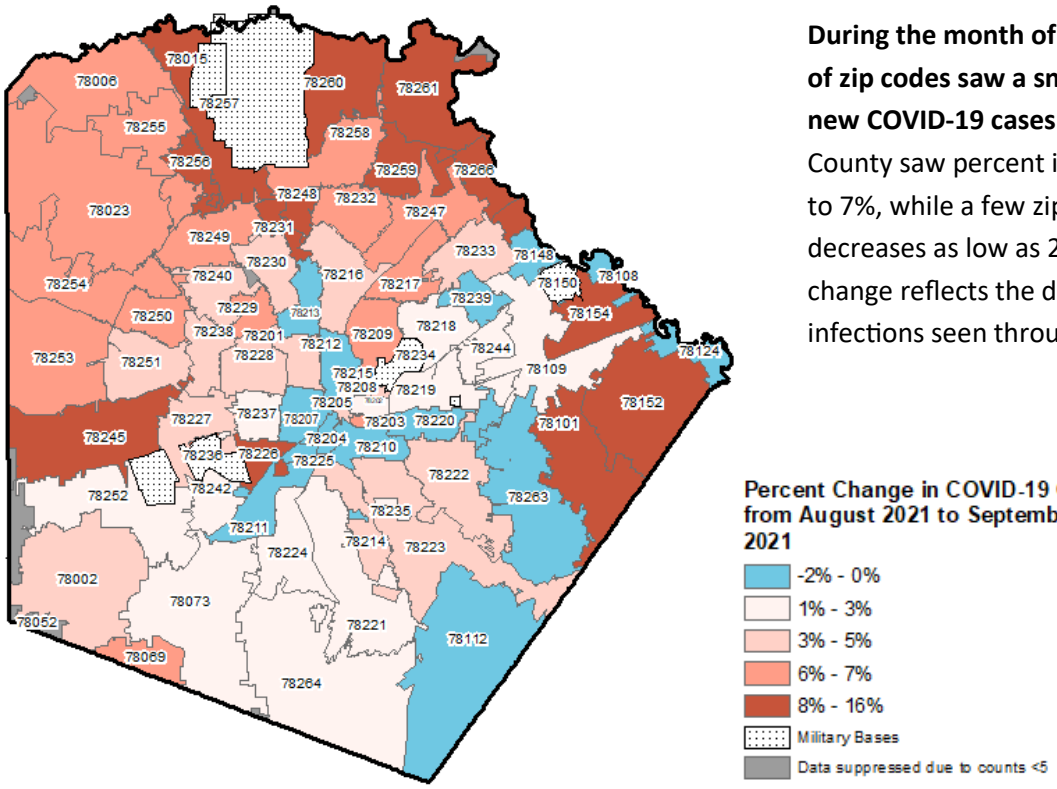


Source: SAMHD COVID-19 case data up to 10/11/2021, event dates through 09/30/2021

The map shows COVID-19 deaths per 100 COVID-19 cases (case fatality rate) by Bexar County zip code. Excluded are cases that occurred in congregate settings (defined here as nursing homes, assisted living facilities, jails, homeless shelters, rehabilitation facilities, and military barracks). The highest case fatality rates continue to be found in zip codes closest to downtown, and in the extreme southeast, and southwest of the county. The pattern of higher rates in the central and southern zip codes has remained consistent throughout the pandemic.

VI. Percent Change of COVID-19 Cases, June-July 2021

Percent Change in COVID-19 Cases from August '21 to September '21 by Zip Code

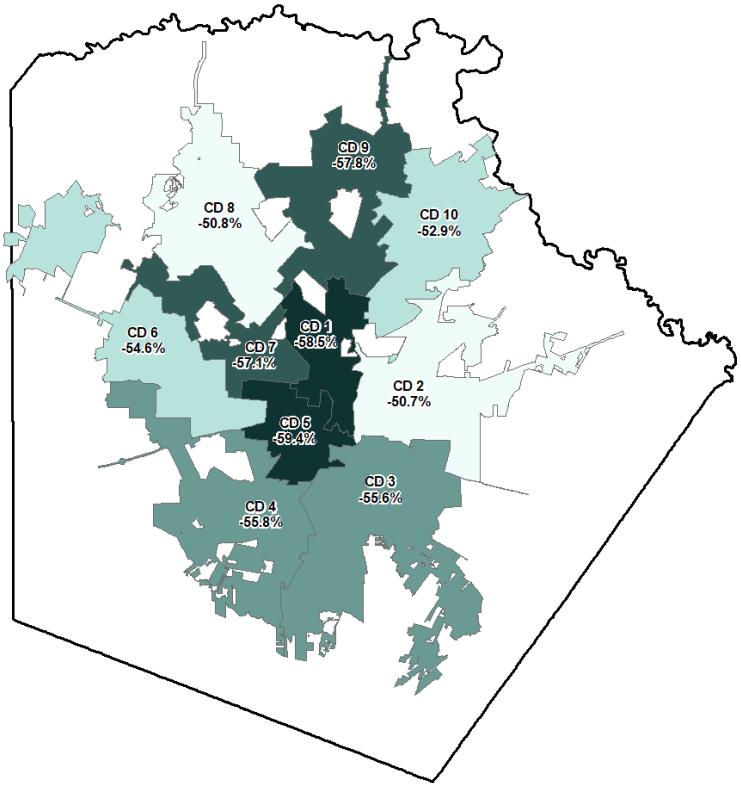


During the month of September 2021, majority of zip codes saw a small percent increase in new COVID-19 cases. Several zip codes in Bexar County saw percent increases ranging from 1% to 7%, while a few zip codes saw percent decreases as low as 2%. This drop in percent change reflects the decrease in COVID-19 infections seen through September 2021.

Percent Change in COVID-19 Cases from August 2021 to September 2021

- -2% - 0%
- 1% - 3%
- 3% - 5%
- 6% - 7%
- 8% - 16%
- Military Bases
- Data suppressed due to counts <5

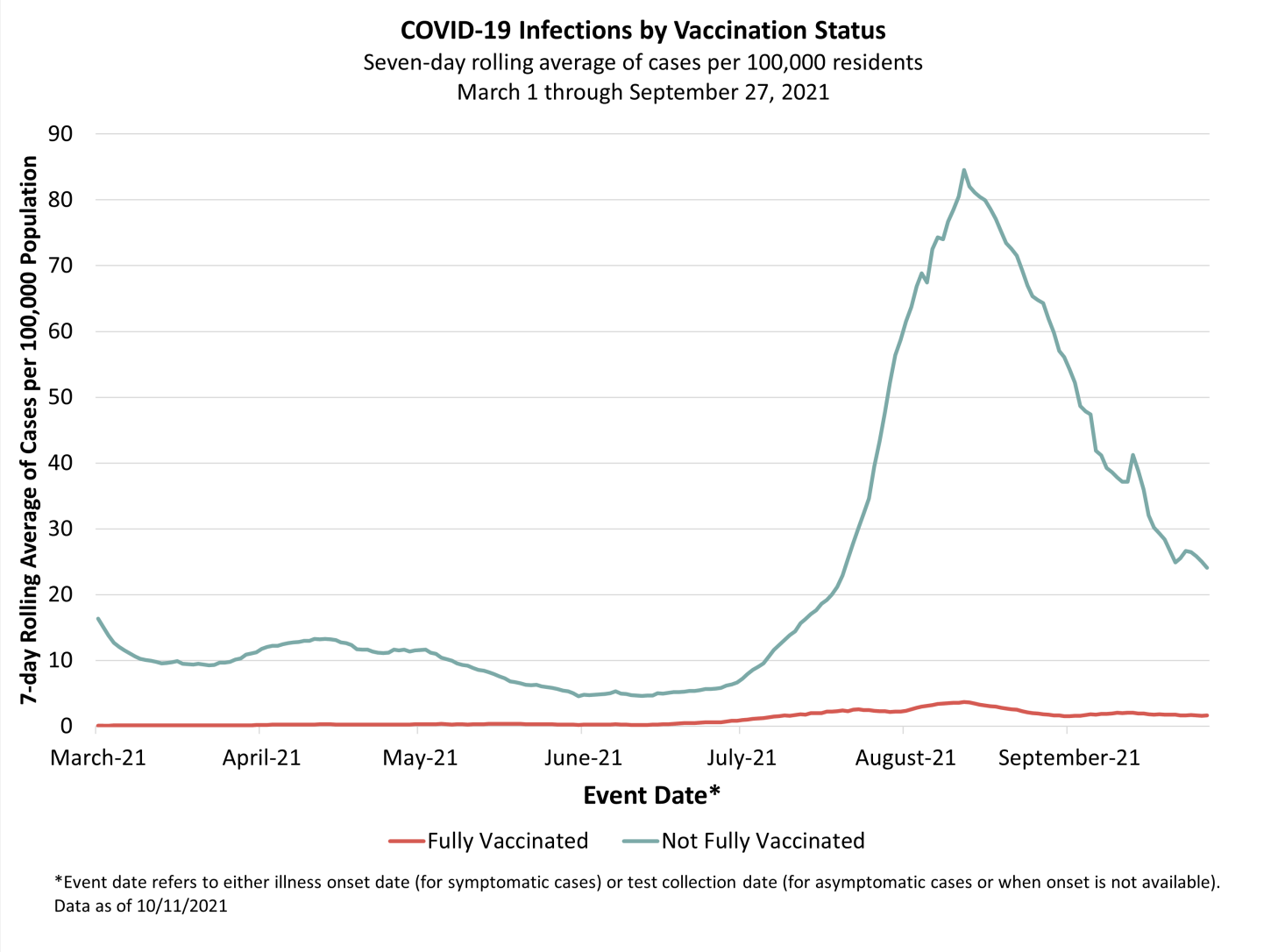
Percent Change in COVID-19 Cases from August '21 to September '21 by Council District



The map to the left depicts the percent change in COVID-19 cases from August 2021 to September 2021 by City of San Antonio Council District. In comparison to August 2021, every council district continued to see a percent decrease in newly diagnosed COVID-19 cases, ranging from around 51% to over 60% in September 2021. Council Districts 5 and 1 both saw the largest decrease of approximately 59% and 60%, respectively, less COVID-19 cases in September than in August 2021. The City of San Antonio as a whole saw a 56% decrease in new COVID-19 cases in September 2021 compared to August 2021.

VII. Vaccinated and Unvaccinated COVID-19 Cases

The seven-day rolling incidence of fully vaccinated cases and not fully vaccinated cases decreased to 1.7 per 100,000 population and 22 per 100,000 population, respectively, by the end of September 2021. **This represented approximately a 54% decrease in fully vaccinated cases and a 73% decrease in not fully vaccinated cases** from the end of August 2021.



*Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset is not available).
Data as of 10/11/2021